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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,100	06/26/2003	Brent Edward Sealy	201-0332	1099
22844	7590	06/28/2004	EXAMINER	
FORD GLOBAL TECHNOLOGIES, LLC. SUITE 600 - PARKLANE TOWERS EAST ONE PARKLANE BLVD. DEARBORN, MI 48126			TRAN, BINH Q	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,100

Applicant(s)

SEALY ET AL.

Examiner

BINH Q. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 6-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/24/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, and 8-13 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nasu (Patent Number 5,475,975).

Regarding claims 1, 9, and 13, Nasu discloses a method of controlling an internal combustion engine (8) of a vehicle, the engine communicating exhaust gases to a catalyst (e.g. 12), the method comprising: predicting a future engine operating event that will change an exhaust gas constituent in the exhaust gases (e.g. See col. 8, lines 11-67; col. 9, lines 1-67; col. 10, lines 1-44); determining an oxygen content in exhaust gases downstream of the catalyst coupled to the engine (e.g. See col. 10, lines 45-67; col. 11, lines 1-24); and adjusting an air-fuel ratio of the engine based on said oxygen content and said predicted engine operating event (e.g. See col. 11, lines 25-67; col. 12, lines 1-12).

Regarding claims 2, and 10, Nasu further discloses that the future engine operating event is an increase in inducted air into the engine (e.g. See col. 10, lines 45-67; col. 11, lines 1-67).

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Regarding claims 3, and 11, Nasu further discloses that the adjusting step includes enriching said air/fuel ratio prior to said increase in inducted air (e.g. See col. 10, lines 45-67; col. 11, lines 1-67).

Regarding claim 4, Nasu further discloses that the determining step includes measuring a signal indicative of oxygen content in exhaust gases downstream of the catalyst (e.g. See col. 8, lines 11-67; col. 9, lines 1-67; col. 10, lines 1-44).

Regarding claim 5, and 12, Nasu further discloses that the exhaust gas constituent is NO_x (e.g. See col. 4, lines 57-67).

Regarding claim 8, Nasu further discloses that the event is predicted by determining whether an engine throttle is closed and whether a vehicle speed is below a predetermined calibrated vehicle speed value (e.g. See col. 5, lines 20-67; col. 6, lines 1-14).

Claims 15, and 8-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al. (Pat. No. 6,470,675).

The applied reference has a common Inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 9, and 13, Lewis discloses a method of controlling an internal combustion engine (13) of a vehicle, the engine communicating exhaust gases to a catalyst (e.g. 52), the method comprising: predicting a future engine operating event that

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will change an exhaust gas constituent in the exhaust gases (e.g. See col. 9, lines 25-67); determining an oxygen content in exhaust gases downstream of the catalyst coupled to the engine (e.g. See col. 11, lines 25-64); and adjusting an air-fuel ratio of the engine based on said oxygen content and said predicted engine operating event (e.g. See col. 5, lines 25-59).

Regarding claims 2, and 10, Lewis further discloses that the future engine operating event is an increase in inducted air into the engine (e.g. See col. 5, lines 25-59).

Regarding claims 3, and 11, Lewis further discloses that the adjusting step includes enriching said air/fuel ratio prior to said increase in inducted air (e.g. See col. 5, lines 25-67; col. 6, lines 1-14).

Regarding claim 4, Lewis further discloses that the determining step includes measuring a signal indicative of oxygen content in exhaust gases downstream of the catalyst (e.g. See col. 11, lines 25-64).

Regarding claim 5, and 12, Lewis further discloses that the exhaust gas constituent is NO_x (e.g. See col. 1, lines 12-25).

Regarding claim 8, Lewis further discloses that the event is predicted by determining whether an engine throttle is closed and whether a vehicle speed is below a predetermined calibrated vehicle speed value (e.g. See col. 4, lines 45-67; col. 5, lines 1-59).

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Allowable Subject Matter

Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents:

Kinugasa et al. (Patent Number 6032461), Watanabe (Patent Number 6370872), Shouda et al. (Patent Number 5544639), and Kinugasa et al. (Patent Number 5740669) all discloses an exhaust gas purification for use with an internal combustion engine.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (703) 305-0245. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (703) 308-2623. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

BT
June 24, 2004

A handwritten signature in black ink, appearing to read 'Binh Tran', with a stylized flourish extending from the end.

Binh Tran
Patent Examiner
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